

belong. This latter subgenus consists of prostrate or diffuse shrublets; leaves usually secund, opposite or alternate, most commonly obovate or spatulate and commonly gray or whitish; flowers in secund or cymose inflorescences; perianth segments 4 or 5, usually alike; styles 2–5; and fruit dehiscent.

*Galenia pubescens* (Ecklon & Zeyher) Druce var. *pubescens* (Botanical Society and Exchange Club of the British Isles 1916:624, 1917). Suffrutescent perennial, forming green or grayish patches 1 m or more across. Stems procumbent, 2.5–15 dm long, much branched. Young parts with closely appressed rather coarse hairs, the older glabrescent. Leaves alternate, papillose; those on the main shoots broadly obovate-spatulate, 5–22 mm long, 2–20 mm wide, obtuse or subobtuse, narrowed at the base, often falling at about flowering time; those on lateral branches smaller, more acute, often concave above. Flowers on alternate secund lateral branches 2–8 cm long, either distant or crowded, and often themselves branched. The flowers solitary or with a pair of branchlets from the base 1–3 mm long, each bearing 1–3 flowers. Bracts similar to the leaves but smaller, less narrowed at their bases. Perianth segments generally 5, 2–3 mm long by ca. 1 mm broad, pubescent with closely appressed hairs outside, white to pinkish inside; anthers usually pink (pale salmon-pink in the Signal Hill material). Capsule conspicuous, 2.5–3 mm wide, 1 mm long, persistent with leaf bases. Seeds ca. 1.2–1.4 mm long, subreniform-ovate in profile, glossy black (reddish-brown when immature), striate dorsally, the striations broken and somewhat tuberculate laterally.

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## NOTEWORTHY COLLECTIONS

### ARIZONA

*LEPIDIUM LATIFOLIUM* L. (BRASSICACEAE). — Coconino Co., Grand Canyon National Park, Colorado River Mile (CRM) 37 [below Lees Ferry], Tatahatso Wash pool at base of wash and outflow, 30 July 1978, *Gloria Hardwich Griffith s.n.* (MNA).

*Previous knowledge.* An eastern Mediterranean weed that has been spreading in the U.S. from east to west, it occurs in Utah and California. The closest published population in Utah is in Washington Co. (Albee et al., Atlas of the Vascular Plants of Utah, 1988), although it is more common along the Wasatch Front and tributaries into the Green River in northeastern Utah. It should be looked for in the Green and Colorado river drainages in southeastern Utah and additional tributaries of the Colorado in the Grand Canyon.

*Significance.* The MNA specimen represents the first collection from Arizona (misidentified as *L. medium*) and may document the site of introduction. This species is rapidly colonizing moist sandy beaches and channel margin habitats along the length of the Colorado River in Grand Canyon National Park. In the past two years it has been documented from numerous additional sites: CRM 24.5, 34–36, 43, 51.5, 56, 59, 71, 74, and 194 [duplicate verified by I. Al-Shebaz (MO)]. Specimens from these locations are deposited at ASC. The plants are long-lived perennials that reproduce by rhizomes as well as setting hundreds of seeds that become mucilaginous and sticky

when wetted. In the near future, *L. latifolium* could become the dominant vegetation along the lower riparian zone in the Colorado River corridor.

—TINA AYERS, Northern Arizona University, Biological Sciences Department, P.O. Box 5640, Flagstaff, AZ 86011 and LAWRENCE E. STEVENS, Resources Management Division, Grand Canyon National Park, Grand Canyon, AZ 86023.

#### MONTANA

*BRAYA HUMILIS* (C. A. MEY.) ROBINS. (BRASSICACEAE).—Beaverhead Co., Pioneer Range, Lion Mtn., 12 km S of Wise River, locally common in dolomite-derived soil on a gentle S-facing slope with *Dryas octopetala* and *Saxifraga oppositifolia*, T3S R11W S3, 2865 m, 25 Jul 1991, *P. Lesica* and *S. V. Cooper* 5532 (MONTU, GH). Verified by R. H. Rollins (GH).

*Significance.* First report for Montana, 650 km S of the nearest station in SW Alta and 1000 km NW of disjunct populations in c. Colorado.

*CAMISSONIA PARVULA* (NUTT.) RAVEN (ONAGRACEAE).—Carbon Co., Pryor Mtns. Desert, 3 km E of Bear Canyon, uncommon in sand at the edge of calcareous outcrops at the mouth of a small drainage with *Phacelia ivesiana* and *Streptanthella longirostris*, T9S R26E S10 NE¼, 1570 m, 12 Jun 1991, *P. Lesica* 5406 (MONTU); ca. 2 km W of Gypsum Creek, local in sandy soil at the edge of a small drainage with *P. ivesiana* and *Gilia inconspicua*, T9S R26E S12 SW¼, 1615 m, 12 Jun 1991, *P. Lesica* 5408 (MONTU, NY). *Lesica* 5408 verified by A. Cronquist (NY).

*Significance.* First report for Montana, an extension of 120 km N from Washakie Co., Wyoming.

*CHAENORRHINUM MINUS* (L.) LANGE (SCROPHULARIACEAE).—Flathead Co., along Hwy 2 ca. 8 km E of West Glacier, locally common in gravelly soil beneath cottonwoods with *Agrostis alba* and *Crepis tectorum*, T32N R18W S34, 1035 m, 10 Jul 1991. *P. Lesica* 5484 (MONT, NY); Lincoln Co., on the banks on Lake Koocanusa (reservoir), common in moist sandy soil with *Matricaria matricarioides* and *Polygonum aviculare*, T36N R28W S1, 775 m, 16 Jul 1992, *P. Lesica* 5786 (MONTU); Missoula Co., Stickney home on the W side of Rattlesnake Creek Valley ca. 1.5 km NNE of Missoula, adventive in domestic flower garden, T31N R19W S14, 1020 m, 10 Jul 1976, *P. F. Stickney* 3418 (MRC, ID, MONT, MONTU, WS, USFS/RM). *Lesica* 5484 verified by A. Cronquist (NY); *Stickney* 3418 determined by M. P. Widrechner.

*Previous knowledge.* Since first recorded in 1874 at Camden, New Jersey this southern European species' discontinuous and at times rapid spread across transcontinental Canada and e. U.S. has been associated with railroads (Arnold, *Natural History* 90(8): 58–65, 1981; Widrechner, *Canadian Journal of Botany* 61:179–187, 1983; Moss & Packer, *Flora of Alberta* 2nd edition, 1983; Great Plains Flora Association, *Flora of the Great Plains*, 1986). The earliest known station near Montana was detected sometime between 1940 and 1974 and reported by Taylor for the extreme SE corner of British Columbia (*The Figwort Family Scrophulariaceae of British Columbia*, B.C. Provincial Museum Handbook No. 33, 1974). This location is approximately 80 km NW of *Lesica* 5484 and 30 km ENE of *Lesica* 5786. Occurrences in e. Washington, w-c. Idaho and ne. Oregon were recently reported by Old et al. (*Madroño* 40:136, 1993).

*Significance.* First report for Montana; not listed in *Flora of Montana Part 2* (Booth & Wright 1966) or *Vascular Plants of Montana* (Dorn 1984). *Lesica* 5484 is in the vicinity of a transcontinental railroad. *Stickney* 3418 appeared abruptly in a spring bulb garden, possibly introduced with potted bedding plants. Since 1976 it has remained within the yard and its ability to disperse locally appears limited.

*CRYPTANTHA SCOPARIA* A. NELSON (BORAGINACEAE).—Carbon Co., Pryor Mtns. Desert, 6 km N of Frannie, Wyoming, locally common in sandy soil on an upper E-facing slope of a low ridge with *Gilia leptomeria* and *Lappula redowskii*, T9S R25E S24 SW¼, 1370 m, 11 Jun 1991, *P. Lesica* 5391 (MONTU, MONT); same location, 28 Jun 1991, *P. Lesica* 5469 (MONTU, NY). *Lesica* 5469 verified by A. Cronquist (NY).

*Significance.* First report for Montana, an extension of 320 km N from Sweetwater Co., Wyoming and ca. 360 km NE from s. Idaho.

*ERIOGONUM SALSUGINOSUM* (NUTT.) HOOK. [= *STENOGONUM SALSUGINOSUM* NUTT.] (POLYGONACEAE).—Carbon Co., Pryor Mtns. Desert, ca. 1 km N of McKown Well, abundant in bentonitic soil of badlands toeslopes with *Allium textile* and *Halogeton glomeratus*, T9S R26E S27, 1450 m, 11 Jun 1991, *P. Lesica* 5387 (MONTU); same location, 24 Jun 1991, *P. Lesica* 5435 (MONTU).

*Significance.* First report for Montana, an extension of 120 km N from Washakie Co., Wyoming.

*ERIOPHORUM CALLITRIX* CHAM. (CYPERACEAE).—Carbon Co., Beartooth Mtns., near Hwy 212 just W of Wyoming Creek, common in wet tundra at head of a small creek with *Salix planifolia* and *Carex scopulorum*, T9S R19E S20 SW¼, 2985 m, 15 Aug 1991, *P. Lesica* 5585 (MONTU, NY); Line Creek Plateau, uncommon in wet turf at the head of a small drainage, with *S. planifolia* and *C. scopulorum*, T9S R19E S27, 3050 m, 16 Aug 1991, *P. Lesica* 5591 (MONTU, NY). Verified by A. Cronquist (NY).

*Significance.* First record from Montana; previously known from adjacent Park Co., Wyoming.

*HAPLOPAPPUS CARTHAMOIDES* (HOOK.) A. GRAY VAR. *SUBSQUARROSUS* (GREENE) DORN (ASTERACEAE).—Carbon Co., Beartooth Mtns., along North Line Creek below Line Creek Plateau, common in limber pine woodland with *Artemisia tridentata* and *Agropyron spicatum*, T9S R20E S21, 2195 m, 6 Aug 1993, *P. Lesica* 6185 (MONTU, RM); along Robertson Draw below Line Creek Plateau, common in grasslands with *Agropyron spicatum* and *Stipa comata*, T9S R20E S27, 1845 m, 6 Aug 1993, *P. Lesica* 6186 (MONTU). Verified by R. Dorn (RM).

*Significance.* First report for Montana; previously known only from adjacent Park Co., Wyoming. Currently a candidate for listing as a threatened or endangered species by U.S.F.W.S.

*KALMIA POLIFOLIA* WANG. VAR. *POLIFOLIA* [= *K. OCCIDENTALIS* SMALL] (ERICACEAE).—Flathead Co., Glacier National Park, along the W edge of McGee Meadows, locally common in *Sphagnum* moss at the periphery of a spruce forest with *Ledum glandulosum* and *Potentilla palustris*, 1190 m, 17 May 1993, *P. Lesica* 5901 (MONTU, NHA); Numa Ridge ca. 3 km NE of foot of Bowman Lake ca. 9 km NE of Polebridge, common on hummocks in a *Sphagnum* bog with *Ledum glandulosum* and *Lycopus uniflorus*, 1525 m, 24 Aug 1986, *P. Lesica* and *A. DeBolt* 4105 (MONTU); Missoula, Co., Bitterroot Mtns., Mary's Frog Pond 31 km SW of Missoula, common to lake shore margin with *Ledum glandulosum* and *Sphagnum* sp., T11N R22W S15, 1750 m, 25 May 1969, *P. F. Stickney* 1830 (MRC, MONT, USFS/RM); same location, 14 May 1987, *R. A. Petty* 64 (MONTU); Jocko Mtns., Sheep Mtn. Bog 18 km ENE of Missoula, slightly raised areas of bog margin with *Ledum glandulosum*, T14N R17W S19, 1920 m, 17 Oct 1981, *P. F. Stickney* 4085 (MRC, USFS/RM); Ravalli Co., Bitterroot Mtns., Lower Twin Lake at headwater of Lost Horse Creek, moist site at margin of subalpine forest, T5N R23W S29, 1980 m, 23 Aug 1959, *P. F. Stickney s.n.* (MRC). *Lesica* 5901 verified by G. Crow (NHA); *Stickney* 1830 determined by C. Feddema (USFS).

*Significance.* First report for Montana and the Northern Rocky Mountains; an extension of 800 km S from n. Alberta and 550 km E from w. Washington.



*LOMATIUM ATTENUATUM* EVERT (APIACEAE).—Beaverhead Co., Tendoy Mtns., side canyon N of Limekiln Canyon, common in limestone talus on a steep SW-facing slope, T11S R11W S1, 1920 m, 8 Jun 1993, *P. Lesica 5990* (MONTU, RM).

*Significance.* First report of this newly described species (Evert, *Madroño* 30:143–146, 1983) for Montana; previously known only from Park Co., Wyoming.

*MIMULUS BREVIFLORUS* PIPER (SCROPHULARIACEAE).—Flathead Co., Glacier National Park, along the trail above Ole Creek, locally common in open soil of SE-facing slopes with *Collinsia parviflora* and *Epilobium minutum*, T29N R16W S13, 1220 m, 1 Jun 1992, *P. Lesica 5664* (MONTU); above Ole Creek 4 km E of Walton, local on wet moss on large rock outcrops with *Epilobium minutum* and *Arenaria serpyllifolia*, T29N R15W S7 SW¼, 1280 m, 3 Jun 1993, *P. Lesica 5980* (MONTU). *Lesica 5664* verified by R. Meinke (OSC).

*Significance.* First report for Montana, an extension of 240 km E from n. Idaho.

*NAMA DENSUM* LEM. VAR. *PARVIFLORUM* (GREENM.) HITCHC. (HYDROPHYLLACEAE).—Carbon Co., Pryor Mtns. Desert, 1 km SE of mouth of Bear Canyon, local in sand at the edge of calcareous sandstone outcrops with *Phacelia ivesiana* and *Gilia leptomeria*, T9S R26E S9 NE¼, 1540 m, 12 Jun 1991, *P. Lesica 5403* (MONTU, NY). Verified by A. Cronquist (NY).

*Significance.* First report for Montana.

*PEDIOCACTUS SIMPSONII* (ENGELM.) BRITTON & BROWN (CACTACEAE).—Beaverhead Co., N of Sheep Corral Gulch 8 km S of Bannack, uncommon and local in sagebrush steppe with *Agropyron spicatum* and *Eriogonum ovalifolium*, T8S R12W S16, 1875 m, 3 Jul 1991, *P. Lesica 5473* (MONTU, NY, BYU). Verified by S. L. Welsh (BYU).

*Significance.* First report for Montana, a range extension of 60 km E from Lemhi Co., Idaho. This species has now been collected from at least six other locations in s. Beaverhead Co.

*POA CURTA* RYDB. (POACEAE).—Carbon Co., Pryor Mtns., basin at the head of Layout Creek, common in Douglas-fir forest with *Arnica cordifolia* and *Solidago spathulata*, T8S R28E S33, 2040 m, 19 Jun 1992, *P. Lesica & R. DeVelice 5704* (MONTU, UT). Determined by Lois Arnow (UT).

*Significance.* First report for Montana, previously known from adjacent Park Co., Wyoming.

*SATUREJA ACINOS* (L.) SCHEELE (LAMIACEAE).—Powell Co., 1 km N of Tupper Lake, locally common in gravelly soil at the edge of an old logging road with *Centaurea maculosa* and *Filago arvensis*, T15N R10W S30, 1400 m, 29 Jul 1993, *P. Lesica 6136* (MONTU, NHA). Verified by G. Crow (NHA).

*Significance.* First report of this introduced species for Montana and the Northern Rocky Mountains.

*SAXIFRAGA HIRCULUS* L. [= *HIRCULUS PROPREPENS* (FISCH.) LOVE AND LOVE] (SAXIFRAGACEAE).—Carbon Co., Beartooth Mtns., along the stream feeding into Crescent Lake on the Hellroaring Plateau, uncommon in wet, organic soil of an alpine fen, T9S R18E S15, 3110 m, 8 Aug 1993, *P. Lesica 6190* (MONTU, CO). Verified by W. A. Weber (CO).

*Significance.* First report for Montana and the Northern Rocky Mountains; an extension of 2300 km S from n. British Columbia and 500 km N from disjunct populations in Utah.

We are grateful to Ronald Hartman (RM) for providing collection data and to Matt Lavin for allowing us use of the facilities at MONT.

—PETER LESICA, Herbarium, Division of Biological Sciences, University of Montana, Missoula, MT 59812 and PETER F. STICKNEY, USDA Forest Service, Intermountain Research Station, Forestry Sciences Laboratory, P.O. Box 8089, Missoula, MT 59807.

## OREGON

*CAREX WHITNEY* OLNEY (CYPERACEAE).—Wasco Co., partial shade of open *Pinus contorta*, with *Carex rossii*, *Penstemon euglaucus*, *Fragaria virginiana*, edge of USFS hiking trails 468 & 469, headwaters of Little Badger Cr., 19 km ESE of Mt. Hood summit, 1540 m, Badger Cr. Wilderness, Mt. Hood National Forest; T3S R11E S8 SE¼ of SW¼; 29 July 1991; *Zika 11311* (OSC).

*Previous knowledge.* Northern limit of range reported as Crater Lake National Park, Klamath Co., according to collections at OSC, ORE, WILLU, and Howell (Leaflets of Western Botany 8:220–224, 1958). Endemic to Oregon and California. Although common in the California Sierra it is rare in Oregon, where it was last collected in 1936 (Oregon Natural Heritage Program, Rare, Threatened and Endangered Plants and Animals of Oregon, ONHP, Portland, 1993). Surveys for the species in 1993, funded by a grant from the Crater Lake Natural History Association, showed it is extant in Crater Lake National Park.

*Significance.* Northern range extension in Cascade Mts. by 270 km from Crater Lake.

—PETER F. ZIKA, Herbarium, Department of Botany, Oregon State University, Corvallis, OR 97331.

## YUKON

*BOTRYCHIUM MULTIFIDUM* (GMEL.) RUPR. VAR. *MULTIFIDUM* (OPHIOGLOSSACEAE).—Yukon Territory, southeast of Dawson along Rt. 2; 63°56'25"N, 138°30'59"W; growing in old gravel road bed, ca. 0.5 km east of Rt. 2; old road cut bisected a *Populus tremuloides*/*Picea glauca* stand; ca. 683 m, 24 July 1993, *Robert W. Lichvar and Catherine E. Kennedy 7915* (DAO), Det. William J. Cody. After a short search, only 2 individuals were located growing in the abandoned gravel road bed.

*Previous knowledge.* Raup reported *B. multifidum* from Fort Simpson, District of Mackenzie, Northwest Territories, ca. 900 km SE, but did not specify which variety (Raup, The Botany of Southwestern Mackenzie, Sargentia 6, 1947). Cody (1993) determined this collection to be var. *multifidum* (Raup and Soper 9917, GH, photo DOA). Cody reported var. *multifidum* from Fort Smith on the Alberta–District of Mackenzie border some 550 km farther SE (Cody, The Canadian Field-Naturalist 70(3):101–130, 1956). Taylor stated that nearly all plants in the Alaskan Panhandle, British Columbia and southward belonged to var. *intermedium* (D. C. Eat.) Farw. but did not distinguish the varieties on his map (Taylor, Pacific Northwest Ferns and Their Allies, University Toronto Press, 1970). The nearest location in the Alaskan Panhandle is ca. S. Hultén reported ssp. *robustum* (Rupr.) Clausen (=var. *intermedium*) from the eastern Aleutian Islands, Alaska, ca. 1175 km SW (Hultén, Flora of Alaska and Yukon, Lunds Universitets Årsskrift N.F., Avd., 2, 37:1, 1941). One collection of var. *multifidum* has been made near Fairbanks, Alaska, ca. 350 km NW (*A. Bierman s.n.*, ALA, photo DAO) and one collection of var. *intermedium* has been made on Evans Island, Alaska, ca. 650 km SW (*E. Bishop 1902*, ALA, photo DAO), both determined by Cody (1993).

*Significance.* First record for *B. multifidum* var. *multifidum* in the Yukon Territory, Canada. The distribution map in Cody and Britton (Ferns and Fern Allies of Canada, Agriculture Canada, 1989) for all varieties was based largely on DAO and CAN collections, missed the Raup specimen at Gray Herbarium for Fort Simpson, Northwest Territories. *Botrychium multifidum* var. *multifidum* should be added to the list of rare plants of the Yukon (Douglas et al., The Rare Plants of the Yukon, Syllogeus 28, 1981).

—ROBERT W. LICHVAR, US Army Engineer Waterways Experiment Station, 3909 Halls Ferry Road, Vicksburg, MS 39180 and WILLIAM J. CODY, Agriculture Canada, Centre for Land and Biological Resources Research, Wm. Saunders Building, C.E.F., Ottawa, Ontario K1A 0C6.

## ANNOUNCEMENT

### RANCHO SANTA ANA BOTANIC GARDEN NAMES NEW EXECUTIVE DIRECTOR

Rancho Santa Ana Botanic Garden at Claremont, CA—The Trustees of Rancho Santa Ana Botanic Garden have named Dr. Roy L. Taylor Executive Director effective November 1, 1994.

Dr. Taylor, currently President and Chief Executive Officer for the Chicago Horticultural Society and Director of The Chicago Botanic Garden, is nationally recognized for his contributions to botany, horticulture and the role of botanic gardens in public education and conservation.

Born in Alberta, Canada, Dr. Taylor received his B.S. in Biology at Sir George Williams University, Montreal, and later pursued his doctorate at the University of California, Berkeley where he completed his Ph.D. in Botany. His professional experience includes research and university faculty positions, most recently at the University of Illinois. Prior to his appointment in Chicago in 1985, he was Director of the Botanical Garden and Professor of Botany at the University of British Columbia. From 1965–1968 he was Chief of the Taxonomy and Economic Botany Section for Canada Agriculture in Ottawa.

Dr. Taylor has published widely, authoring the *Flora of the Queen Charlotte Islands* with James A. Calder in 1968, and has served as editor and contributor to over 150 scholarly and horticultural journals. He was the recipient of the Queen's Silver Jubilee Medal in 1977, The George Robert White Medal of Honor from the Massachusetts Horticultural Society in 1986 and the American Association of Botanic Gardens & Arboreta Award of Merit in 1987. He has been involved in many professional organizations and served as Director and later President of AABGA. From 1980 to 1993 he contributed extensively of his talent and time to the American Association of Museums where he served as Chairman of the Accreditation Commission, as well as the first Chairman of the Ethics Commission. Dr. Taylor is also a member of American Society of Plant Taxonomists, Botanical Society of America, International Association of Botanical Gardens, Linnean Society of London, and Fellow of the Royal Horticultural Society. He is founding Trustee of Botanic Gardens Conservation International of Kew, England.